

## CLAIMS

1. A polarizer containing a dichroic material in a matrix, wherein an in-plane retardation at a measurement wavelength providing no absorption is in a range of 950 to 1350 nm.  
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2. The polarizer according to claim 1, wherein a differential retardation fluctuation ( $\sigma$ ) at the measurement wavelength providing no absorption is in a range of -5 nm/mm to 5 nm/mm.  
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3. The polarizer according to claim 1, wherein at the measurement wavelength providing no absorption, a distance between a measurement position providing a maximum value of the in-plane retardation and a measurement position providing a minimum value of the in-plane retardation is in a range not more than 10 mm or not less than 100 mm, and a difference between the maximum value and the minimum value (in-plane retardation variation) is less than 60 nm.  
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4. The polarizer according to claim 1, wherein the measurement wavelength is in a range of 800 to 1500 nm.  
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5. The polarizer according to claim 4, wherein the measurement wavelength is 1000 nm.
6. The polarizer according to claim 1, wherein the matrix is a polymer film.  
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7. The polarizer according to claim 6, wherein the polymer film is a polyvinyl alcohol film.
8. The polarizer according to claim 1, which is chip-cut.  
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9. An optical film comprising the polarizer according to claim 1.
10. The optical film according to claim 9, which further comprises a transparent protective layer, and the transparent protective layer is arranged on at least one surface of the polarizer.  
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11. The polarizing plate according to claim 9, wherein a pressure-sensitive adhesive layer is arranged on at least one outermost surface layer.
12. The optical film according to claim 9, which further comprises at least either a polarization converter or a retardation film.
13. The optical film according to claim 12, wherein the polarization converter is either an anisotropic reflective polarizer or an anisotropic light-scattering polarizer.
14. A liquid crystal panel comprising at least either the polarizer according to claim 1 or the optical film according to claim 9, wherein the polarizer or the optical film is arranged on at least one surface of a liquid crystal cell.
15. A liquid crystal display comprising the liquid crystal panel according to claim 14.
16. The liquid crystal display according to claim 15, which has a flat light source for emitting polarized light.
17. An image display device comprising at least either the polarizer according to claim 1 or the optical film according to claim 9.
18. The image display device according to claim 17, which is an electroluminescent display.
19. An in-house production method for producing the image display device according to claim 17, which comprises a process of chip-cutting at least either the polarizer according to claim 1 or the optical film according to claim 9 and immediately bonding to the display device.